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A Study of Children's Perceptions about Reading in Relation to Various Reading Instructional Programs

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A STUDY OF CHILDREN'S PERCEPTIONS
ABOUT READING IN RELATION TO
VARIOUS READING INSTRUCTIONAL PROGRAMS

THESIS

Submitted to the Graduate Committee of the
Department of Curriculum and Instruction
Faculty of Education
State University College at Brockport
in Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Education

by

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Abstract

This study explored the relationship between cognitive clarity of reading and various reading instructional programs with 72 first and third grade students. The programs included: language experience, analytic phonics, and synthetic phonics.

A semi-structured interview, an aural task, and two visual tasks were given to each child. The interview consisted of nine questions about the nature of reading and the vocabulary used in reading instruction. The interview was measured by a response that suggested either cognitive confusion or cognitive clarity. The aural and visual tasks were given to assess the child's ability to segment words in a written context and an aural context. The aural and visual tasks were scored according to an incorrect or correct response.

A series of chi-square analyses were computed to analyze the data. The results indicated that many young readers do not understand the purpose and process of reading. Elementary students are also confused about the terminology used in reading instruction. Reading instructional programs were shown to have a significant relationship with cognitive clarity of reading. Language experience students showed significantly better responses to the technical terminology used in reading, predictive strategies used in reading, and the understanding of the process of reading, than students from the synthetic phonics or analytic phonics program.

Implications for research included: a larger sample of students, other reading instructional programs, and an enlargement of interview questions with more non-verbal tasks. Classroom recommendations were also suggested. Educators can enhance children's understanding of technical terms used in reading instruction by using the terms appropriately and flexibly and by explaining why certain activities will aid in the understanding of these terms. Encouragement of meaningful conversation and dictated stories of children's own experiences should be included in all reading instruction programs to aid in the understanding of the nature and function of reading. It was also suggested that teachers continually reinforce the communication purpose of reading.

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Chapter 1

Statement of the Problem

Purpose

The purpose of this study was to examine the relationship between cognitive clarity of reading and various reading instructional programs with first and third grade students. The programs included: language experience, analytic phonics, and synthetic phonics. Cognitive clarity of reading was defined as understanding the process involved in learning to read, and understanding the technical vocabulary used in reading instruction (sound, letter, word, and sentence).

The researcher sought answers to this question: Is there a relationship between various reading instructional programs and cognitive clarity of reading with first and third grade students?

Need for the Study

Recent research has found that beginning readers have misconceptions and misunderstandings about the purpose and process of reading. Reid (1966) discovered in a study of five-year-olds, that they did not know what was meant by reading. In a replication of this study Downing (1969) confirmed Reid's conclusion that young children vaguely understand the purpose of reading and the activities involved.

When Weintraub and Denny (1965) asked five classes of first graders, "What is reading?" a fourth of the students could not give a meaningful purpose for learning to read.

Johns and Ellis (1976) in an investigation of students in grades one through eight, found that reading in the classroom was often described as an anxiety producing activity.

The beginning reader is also confused about the technical vocabulary the teacher uses in reading instruction. There is confusion with the terms: word, letter, sound, and sentence (Clay, 1972; Downing & Oliver, 1973-74; Johns, 1982; Meltzer & Herse, 1969; Reid, 1966). Children often confuse "writing" with "drawing" and "letter" with "number". They do not understand these abstract concepts and these words are, as Francis states, "not so much a direct aid to instruction but a challenge to find their meaning" (1973, p. 22).

Many young children are not aware of language as individual lexical units. Holden and MacGinitie (1972) found in a study of 84 kindergarten children that many children segment phrases and sentences according to their speech rather than conventional words. Children do not always understand that words are printed as units, that they are separated by white spaces (Weintraub, 1971, cited by Mickish, 1974). Karpova (1955) studied children's word awareness in spoken language, by having children repeat a sentence aloud and at the same time place a poker chip down while they spoke each word in the sentence. He concluded that children had difficulty

segmenting spoken sentences into their individual words, and that the hardest to isolate as individual units, were the function words (articles, prepositions).

Other research has focused on children's awareness of word boundaries in written language. Meltzer and Herse (1969) studied first graders two months after the school year began. They presented a difficult sentence in which students had to count and circle the individual words. Results of the study indicated that many first graders were unable to visually identify word boundaries in print.

Vernon (1957), the first to note the 'cognitive' confusion of the child when learning to read, defined the term as the child does not understand the nature of the reading task. Downing (1970) further stated that understanding the difference between written and spoken language, understanding the relationship between letter and sound, and being able to understand the concept of word, all contribute to cognitive clarity. Cognitive clarity is highly associated with reading success.

In addition the nature of the instructional materials used can determine what children learn (Meltzer & Herse, 1969). After formal reading instruction with a basal reading series, Meltzer and Herse found that children were using space as a boundary, but were dividing long words at tall letters and combining short words together. They concluded that this was due to the type of reading material used for instruction.

A natural language print environment with dictated stories, shared book experiences, and creative writing where the child is actively engaged in a meaningful language activity may be the best approach for children to understand written language (Morris, 1981).

Goodman (cited in Smith, 1973) states that reading is more a deep level process of identifying meaning that either precedes or makes unnecessary the identifying of individual words. He believes that children have an enormous wealth of intellectual ability. The main factor of reading is not in the particular materials used but in the interaction of the child with information provided by an adult. The most effective use of reading materials is that the "reader functions as a user of language" (1973, p. 181).

How great an effect do reading instructional programs have on children's perceptions of the nature and process of reading? Does one program increase cognitive clarity of reading more than the others? This research examined these questions further.

Definition of Terms

The terms used in this study are defined as follows:

Cognitive clarity is the child's ability to understand the purpose and process of reading. Downing (1970) defined five areas of cognitive clarity:

1. To understand the relationship between the written and spoken form of language.
2. To understand the correspondence of certain printed letters with certain phonetic sounds in words.

3. To understand the communication purpose of written language.

4. To learn the technical vocabulary of language such as sound, letter, and word.

5. To attain concepts of the abstract units that correspond with the technical terminology.

Cognitive confusion is the child's failure to understand the process of learning to read. Vernon (1957) first used this term to describe reading as uncertainty and confusion regarding the technical terminology, and the purpose and process of reading.

Language experience approach is a reading instructional program that uses the child's natural language recorded by the teacher. Later the child writes his own stories, aided by some formal instruction in writing, spelling, editing common words, and exploring the connection between sounds and letters.

Analytic phonics approach is a basal reading series that begins with sentence patterns, phrases, and ultimately whole words and word parts. The phonics teaching in this approach emphasizes learning words as a whole and then examining word parts. Students inductively learn about generalizations and rules about phonics from known sight words.

Synthetic phonics approach emphasizes decoding skills early in the reading process. Students learn from the simpler elements (the letters) to the larger elements (the word). They learn from the part to the whole. Children learn generalizations and rules about phonics deductively.

Limitations of the Study

This study consists of 72 students, 24 students from a language experience program, 24 students from an analytic phonics program, and 24 students from a synthetic phonics program. A total of 36 students represented the first grade with 12 students from each program and 36 students represented the third grade with 12 students from each program. The schools selected were urban, rural, and suburban schools in Central and Western New York State.

Summary

The effect reading instructional programs have on children's perceptions about the nature and process of reading was investigated in this study. Research on children's understanding about the reading process, and the language of instruction was reviewed. Research suggested that reading instructional programs may have an effect on cognitive clarity of reading. Further research with various reading instructional programs needed to be investigated to understand children's concepts about reading with their instructional program.

Chapter II

Review of the Literature

Purpose

The purpose of this study was to investigate the relationship between cognitive clarity of the reading process and various reading instructional programs.

This chapter will review the literature in the following categories: The child's concept of the reading process, language of instruction, reading instructional programs, and the psycholinguistic theory of the reading process.

The Child's Concept of the Reading Process

Recent literature in reading has indicated that young children learning to read in the primary grades are confused about the purpose of reading. Many children have vague ideas about the purpose of reading and are uncertain about the activities involved in reading. Many beginners also have little knowledge of what reading is going to be like. This lack of understanding about reading was first discussed by Vernon (1957) while studying reading disabilities. Vernon used the term "cognitive confusion" to describe the lack of understanding by the student regarding the nature of the reading task. She described this stage as "The child appears hopelessly uncertain and confused as to why certain successions of printed letters should correspond to certain phonetic sounds in words...", and that this demands "a particular type of reasoning process"

which the disabled reader has failed to develop and therefore, "remains in a state of confusion over the whole process" (p. 187). This confusion parallels that of a young child beginning to read.

Following Vernon's theory that cognitive confusion demands a particular type of reasoning process, Downing (1970) postulated the cognitive clarity theory, which would be the opposite of cognitive confusion, stating that the normal reader would understand the connection between the written and spoken forms of language. He theorized that:

The task of mastering the skill of reading poses a very complex problem to be solved by the child. Thus, the learning-to-read process consists in a series of discoveries of solutions to the subproblems which constitute the total complex problem of finding out how to read. As the child's attempted solutions approximate more and more closely to the reality of each aspect of the reading process, so he will achieve more and more cognitive clarity. Therefore, the best measure of a child's progress in solving the learning-to-read problem should be his degree of understanding of the nature of the task. Thus, cognitive clarity will be correlated most highly with reading success while failure in reading will have as its chief symptom cognitive confusion (p. 2).

Downing (1970) summarized five areas of growth in children as they progress in their first year at school:

1. Understanding the communication purpose of the written form of language.

2. Attaining the concept of visual symbol.

3. Attaining concepts of abstract parts of spoken language.

4. Learning the technical vocabulary of language learning.

5. Understanding the decoding process.

Evidence of this process was provided by the research of Reid (1966) and others (Francis, 1973; Johns, 1972; Johns, 1974; Johns & Ellis, 1976). In an attempt to study young children's ideas about beginning reading instruction, Reid interviewed twelve first-grade children in Scotland. Three interviews were conducted throughout the school year where each child was individually asked a set of questions about his general concept of reading and writing and the technical vocabulary involved. Reid (1966) asked questions such as "What is in your books at home? Can you write something for me? Can your Mummy and Daddy read?" She discovered that although almost all of the children could not read and knew it, there also "... was the general lack of any specific expectancies of what reading was going to be like, of what the activity consisted in, of the purpose and the use of it, and of the relationship of reading and writing" (p. 58). When asked what was in books, ten of the twelve children referred to pictures or characters; only one child indicated that books contained words. As the children progressed throughout the school year, they became aware of the relationship between letters and sounds and the difference between pictures and

written symbols. Reid hypothesized that exposure to print aids children in achieving an understanding of the connection of written language and spoken language.

Downing (1971a) replicated and confirmed Reid's study. Downing also included concrete examples to foster nonverbal as well as verbal responses by the children. He found that the use of concrete objects enabled the children to give clearer statements about reading. A model bus was used to elicit responses about the number and the destination of the bus. The children were able to point to the places on the bus and verbalize about where it was going and how one chooses the correct bus.

An investigation of 108 first graders' perceptions of the reading act led Weintraub and Denny (1965) to state that "Twenty-seven percent of the children came to first grade unable to state a cogent definition of reading" (p. 327). When asked, "what is reading?," 33 percent gave object-related responses, such as to read a paper, or reading is when you read a book. Twenty percent described reading in mechanical terms or as something one is expected to do. Another 20 percent saw reading as a cognitive task such as, it helps to learn things and learn to read. Weintraub and Denny concluded that there is a need for teachers to strengthen the emphasis on helping children understand that reading is a thinking and meaningful act.

Another study using a verbal interview to study children's perceptions about the reading process (Tovey, 1976) concluded that

children perceive reading as an oral activity, that they have been conditioned to see reading as reading to someone and not silently communicating with the author. When 30 students in grades 1-6 were asked if they look at every word and every letter while reading, the majority of students said that they did do this. However, when these students performed cloze activities, they did not process every letter or word. It appears that children are conditioned "to think of reading as a process of carefully identifying every bit of visual information" (p. 539). Seventy-two percent of the children failed to identify reading for meaning as the purpose for reading. Tovey suggested that teachers are using the "word recognition equals reading" model where "reading is a word calling process" (p. 540) instead of encouraging children to see reading as a predictive process of using the fewest cues necessary to determine meaning.

Studies of preschoolers' concepts about reading have also been conducted. Mason (1967) asked 178 preschoolers, "Do you like to read? Can you do it all by yourself?" Ninety percent of the children believed they already could read without knowing what reading was. Mason stated that, "One of the first steps in learning to read is learning that one doesn't already know how" (p. 132).

Young children between the ages of four and six see reading as physical behaviors such as turning the pages, looking at the book, or using their eyes. Children at the ages of ten and twelve realize reading is more than looking at words -- they understand that people read for many reasons, and they recognize the need for the reader to

incorporate his own intentions and purposes while reading. Children between sixteen and eighteen years of age determine for themselves what meaning they will obtain through their own experiences and understanding (Huffman, Edwards & Green, 1982). In their study, these researchers concluded that, "Teachers can stimulate the thinking of children at earlier levels of awareness by using, as part of their instruction, some of the reasoning manifested by children at the next stage" (p. 199). Teachers can use reading-for-meaning strategies for the youngest children by asking, "Does that sound right? or Does that make sense?". To encourage the use of semantic and syntactic cues, questions such as "Based on all the things which have happened so far, what do you think is going to happen next?" could be utilized.

Fryer (1976) asked 38 children age four to eight a series of questions in an attempt to study what young children think about reading. She found that learning how to read is closely associated with the development of basic concepts about what reading is. She categorized these concepts into three levels.

Level I - Four to five year olds (approximately):

1. Lack of expectancy of what reading was going to be like.
2. Lack of idea of what reading actually consisted of.
3. Little understanding of purpose of reading.
4. Little understanding of the use of reading.
5. Lack of understanding of relationship between reading and writing.

6. Poverty of linguistic equipment to deal with new experiences.
7. Lack of awareness that books contain stories.
8. Usually did not know birthdays.

Level II - Five to six year olds (approximately):

1. Development of terminology (word, letter, etc.).
2. Search for regularity and rule (time concept).
3. Awareness of the alphabet.
4. Beginning of phonic analysis.

Level III - Six to eight year olds (approximately):

1. Aware of using phonic analysis.
2. Speculation on rules about spelling.
3. Books seen as made up of stories (meaning).
4. Overgeneralization - reading silently has to do with the age of the reader.
5. Words had to mean something.

Fryer (1976) concluded that a child's concept about reading is more important in determining his present ability to read than age or other factors that a teacher might use to determine reading level.

Children are capable of some understanding of the processes and purposes of print even in the early years of the preschool period, according to Hiebert (1981). In contrast to young children studied by Reid (1966) and Weintraub and Denny (1965), these preschoolers were more knowledgeable about print-related topics. She suggested that for young children to understand print, it must be presented in a meaningful, familiar, contextualized way. Hiebert presented

questions about reading using concrete situations allowing the child to verbalize in a meaningful way. One task consisted of asking questions at the end of five short stories about the use of print in that particular situation. The first situation was a group of packages with name-tags on them. The child was asked if there was a way to know which package went to whom. Further questions about the print on the label were asked to involve the child in discussion. Hiebert concluded that today's greater abundance of children's books, exposure to programs such as Sesame Street, and the large number of signs and labels in the environment have produced a greater awareness among younger children than previous generations.

Research has shown that reading is enhanced by a rich home environment which provides opportunities and experiences for meaningful interaction with print (Clark, 1976; Durkin, 1966). Children from homes with an abundance of reading materials and attentive and concerned parents for the reading of their children have an advantage in the initial steps of learning to read. Durkin's study of pre-school readers found that parental help in response to the child's questions, and interest in reading, plays a key role in the early achievement of these children.

Language of Instruction

One characteristic of early readers (Durkin, 1966) is an interest in reading words on signs, labels, and symbols. Many educators have encouraged using these symbols for beginning reading instruction (Nurse, 1980; Smith, 1973; Yliso, 1969).

Studies have shown that young children lack an understanding of the terminology used in reading instruction (Clark, 1976; Clay, 1975; Downing & Oliver, 1973-74; Downing, 1971a; Fletcher, 1977; Meltzer & Herse, 1969; Reid, 1966). Children are confused about the terms word, letter, sound, and sentence. Beginners often confuse writing with drawing and letter with number (Swanson, 1982). Teachers refer to these abstract terms continually in the teaching of reading. However, it is not known if the child actually understands these concepts or if it has just become a part of his language without a cognitive scheme or base (Robeck, 1982). Teachers of beginning reading assume that children share their concepts of terms like word and sound. However, many times the use of words like letter, word and sentence in teaching are, "... not so much a direct aid to instruction but a challenge to find their meaning" (Francis, 1973, p. 22).

The beginning reader's ability to identify technical linguistic terms such as letter, number, and word was investigated by Reid (1966). She found that children called letters 'numbers' and words 'names' and confused individual letters with word concepts, such as "h" for "horse", and that they displayed "... a great poverty of linguistic equipment" (p. 58). Francis (1973) noted in a study of 50 beginning readers that the children learned the concept letter before word and word before sentence. However, she found that the children indicated little relationship between these concepts and spoken language.

Studies by Clay (1972) and Reid (1966) also found that beginning readers do not understand conventional word boundaries. Weintraub (1971, cited by Mickish, 1974) stated that children do not learn to recognize words because they do not understand that words are bounded by white spaces and are printed as units. Downing's (1970) replication and extension of Reid's work found that even the most advanced five-year-olds considered phrases and sentences as examples of words. In Vygotsky's (1962) investigation about children and writing, he found that the main stumbling block for children was the "... abstract quality of written language" (p. 99).

Clay (1972) noted in her longitudinal observation of 100 New Zealand first graders that the ability to identify words in context develops as the young reader becomes aware of the one-to-one correspondence between written and spoken words.

As children progress through the first grade they are better able to understand the technical vocabulary used in reading instruction, and in the reading process through exposure and experience with the written text (Downing, 1970; Downing & Oliver, 1973-74; Francis, 1971; Johns, 1980; Morris, 1980; Reid, 1966; Robeck, 1982). Francis states that understanding the technical vocabulary used in reading instruction is part of the learning-to-read process, rather than a separate conceptual difficulty (Abramson, 1981; Ehri, 1975; Meltzer & Herse, 1969, Mickish, 1974).

In an attempt to study children's understanding of the concept word, studies have included word awareness in the spoken language mode, the written language mode, and a combination of both modes.

In the written mode, Meltzer and Herse (1969) studied first graders' awareness of a written word and its boundaries two and one-half months into the school year. Each child was asked to count and circle the individual word units in a written sentence, "Seven boys in a wagon saw numerous birds downtown today." They concluded that there is a sequence in the development of the concept of word boundaries. The sequence is as follows:

1. Letters are words.
2. A word is made up of more than one letter.
3. Space is used as a boundary unless the words are short, in which case they are combined; or long, in which case they are divided.
4. Only long words continue to be divided.
5. Spaces indicate word boundaries except where there is a "tall" letter in the middle of a word.

Meltzer and Herse concluded that the errors the children made in dividing words were a result of the reading instructional materials to which they were exposed.

Results from the work of Mickish (1974) indicated that many children at the end of their first year of reading instruction were not able to mark word boundaries (Evans, Taylor, & Blum, 1979).

Papandropoulou and Sinclair (1974) interviewed 102 children aged four to ten, and determined four levels about their concept of a word. The youngest children those between four and five years of age, made no distinction between words and things. "Strawberry is a

word because it grows in the garden" (p. 244). Long words refer to long or big objects or distance (Downing, 1971; Meltzer & Herse, 1969). At the second level between five and seven years of age, children see words in a global sense, such as full sentences, or understanding that a word has a certain number of letters and that it is a name, generally a noun. At the third level between six and eight years of age, children begin to attach meaning to words. They realize that words have a status as elements, but only in the sense that they are built up from several words. At the fourth level between eight and ten years of age, words become meaningful units and words have a relationship with other words.

Other experiments have focused on children's conception of a "spoken word." Karpova (1955) in a series of experiments asked Russian children between the ages of three and seven to listen to a sentence spoken aloud, and then to repeat the sentence and to lay down or tap a poker chip as they spoke each word in the sentence. Results showed that the youngest children generally did not break up the sentence into parts. The next older group of children isolated the parts into semantic components. The oldest children were able to isolate almost all of the words except for prepositions and conjunctions. In similar studies by Holden and MacGinitie (1972) and Ehri (1975) results showed that children's conceptions of word boundaries often reflect linguistic divisions rather than the conventional definition of the printed word. Also increased reading ability aids in the development of proficiency in aural segmentation

of words and word consciousness in general (Allen, 1982; Ehri, 1975; McNinch, 1974).

In a study of 66 children between the ages of four and five years of age, Huttenlocher (1964) reported that these children were not aurally aware of word boundaries and they could not separate multi-word phrases into single words. The most difficult items for the children to separate or reverse were those that they were most likely to hear in everyday language such as, it is or red apple. The sequences that were easiest to divide were those that are not that common, such as man/table.

Downing (1970) and Downing and Oliver (1973-74) also investigated children's conception of a spoken word in an aural context. In these experiments pre-readers and beginning readers were shown various types of verbal stimuli (phonemes, syllables, short words, long words, phrases, and sentences) and were told to respond "yes" if they thought the stimulus was a word and "no" if they did not. Findings showed that the children confused words with other stimuli, especially phonemes and syllables.

Morris (1980) and Morris and Henderson (1981) contend that previous research of word awareness has not tapped beginning readers' comprehension of the correspondence between spoken and written word units. The child has been asked either to visually identify word boundaries in a written sentence or to perceive aural word boundaries in a spoken sentence. He suggested that Clay's (1972) research more closely studied readers' beginning awareness of this

spoken word-written word match. Clay based her findings on detailed reports of close observation of beginning readers. She found that finger-pointing and voice-pointing (read the sentence in a slow word by word manner) strengthened beginning readers' perceptions of the one-to-one correspondence between written and spoken words. Clay points out that children discover understanding about written language when they are exposed to lines of print and not before.

In an attempt to assess beginning readers' implied knowledge of the spoken word-written word match, an indirect assessment was used to allow inference of the concept of word without requiring children's conscious responses to linguistic terminology (Morris, 1980). Morris had 30 first grade children aurally learn a four-line rhyme. The children were then asked to point to words as they read the printed poem and identify certain words in the text. The children's success in recognizing specific words in the poem indirectly identified their knowledge of the match of spoken words and their representation in print. Furthermore, Morris found a strong correlation between early reading achievement and the ability to understand the concept word.

Reading Instructional Programs

The nature of the instructional materials used can determine what children learn. Meltzer and Herse (1969) in a study of word boundaries concluded that the errors children made in dividing words were a result of the type of basal reading materials they had

been using in their instruction. They found that all the words in the pre-primers used by the children were five letters or less in length except for three six letter words and one nine letter word.

Reading instructional programs are based on different philosophies regarding how children learn and their interpretation of the learning process. The most widely used instructional materials in this country have been the basal reader series. Generally basal readers are designed to bring children through a series of books to a high degree of reading proficiency (Heilman, Blair, & Rupley, 1981). Basal reader programs differ in their beginning emphasis on meaning and word recognition skills. Analytic phonics basals are "designed to teach the child to arrive at generalizations and rules about phonics inductively from known sight words" (Chall, 1967). This type of basal emphasizes meaning in reading from the very beginning. This approach begins with sentence patterns, phrases, and finally whole words and word parts such as affixes. The phonics teaching in this approach emphasizes learning words as a whole and then examining word parts. Synthetic phonics basals emphasize decoding skills early in the reading process. Defined as code-emphasis programs (Chall, 1967), they aim at the beginning to teach the alphabetic code assuming this will lead to more successful reading. Synthetic methods build larger elements (the word) from simpler elements (the letters), or "going from the part to the whole." Children arrive at generalizations and rules about phonics deductively. Reading of stories is delayed until a mastery of a considerable amount of phonics is achieved.

Some of the advantages of using a basal reading series include: excellent photographs and artwork, systematic instruction throughout the grades, excellent teacher guides for step-by-step programs, skills presented in a logical sequence, prepared materials which save teachers time, and diagnostic tests within the series following the materials teachers use (Heilman, Blair, & Rupley, 1981).

Some of the criticisms against basal reading series include: story content is boring, stories are culturally biased, stories lack literary merit (although recent editions now include poetry and award-winning authors of children's literature, to mention a few) and the language is repetitive and unrealistic (Heilman, Blair, & Rupley, 1981).

The language experience approach is a reading instructional program which uses the language and the thinking of the learner as the foundation for reading instruction (Hall, 1981). The uniqueness of the program is the use of reading materials created by the learner about his experiences and expressed in his own language. This reading approach integrates reading instruction with the other language arts as children express their personal experiences and ideas through listening, speaking, writing, and reading. This approach assumes that reading has the most meaning when the materials are expressed in a child's own language and are founded by his own experiences (Hall, 1981). The child's natural language stories are recorded by the teacher in beginning reading. Later the child writes his own stories, aided by some formal instruction in writing, spelling, editing common words, and exploring the connection between sounds and letters.

Advantages of the language experience approach are: the practice, transfer, and application of word identification and comprehension skills in a meaningful context, emphasis on the relationship between oral and written language to aid in the understanding that reading is the comprehension of ideas, the involvement of pupils in meaningful instruction built on their own interests, and the provision of both individual and group reading instruction (Heilman, Blair, & Rupley, 1981).

Some disadvantages of the language experience approach are: it is difficult to control vocabulary, basic sight words may not be repeated often enough to insure mastery; when used as the total reading method, it puts too much burden on the teacher, demanding much time; it is difficult to adapt the instruction to the needs and abilities of all children, and it encourages memorization rather than mastery of sight words (Heilman, Blair, & Rupley, 1981).

Psycholinguistic Theory of Reading

The psycholinguistic theory of the reading process defined by Goodman (cited in Gollasch, 1982), Smith (1973) and others assumes that beginning readers, if surrounded by meaningful print, ought to be able to learn to read as easily as they learned to speak. By being exposed to a variety of stimulating print, children will discover for themselves the sound-symbol relationships and with their knowledge of syntax and word meanings developed by listening and speaking, they will learn to read as naturally as they learned to talk. Goodman (cited in Gollasch, 1982) called reading a

"psycholinguistic guessing game" (p. 158) where the child develops strategies to guess intelligently, predict outcomes; to process, sample and confirm information; and actively make sense of the written language. Children have a great deal of motivation to learn to read. They need to understand written language to be able to express their ideas (Goodman, cited in Gollasch, 1982).

Beginning readers use three types of information: grapho-phonetic information = cues involving visual patterns to corresponding sound sequences, syntactic information = cues involving the readers' use of word order, inflectional endings, and function words to predict structure while reading, and semantic information = cues involving knowledge of word meaning and conceptual and experiential background utilization to get meaning from the context (Goodman, cited in Smith, 1973).

Obtaining meaning from language and helping children to be critical readers should be the ultimate goals in reading instruction (Goodman, cited in Smith, 1973). To be able to read for meaning does not mean identifying every word. It is only by reading for meaning first that reading of individual words can be correctly identified (Smith, 1973).

Goodman (cited in Smith, 1973) believes that reading is learned from whole to part, from the simple to the complex. As long as there is meaning involved children will be able to process the information. "Reading is not a process of combining individual letters into words, and strings of words into sentences, from which meanings spring

automatically. Rather ... the deep level process of identifying meaning either precedes or makes unnecessary the process of identifying individual words" (Smith, 1973, p. 180).

The psycholinguistic theory of reading conflicts with the philosophy of basal readers. Basal readers emphasize word identification as the foundation for reading comprehension and stress phonics, but Smith and Goodman argue that teaching phonics makes it harder not easier to learn to read (Newman, 1982). Goodman feels that children having already known their sounds by communicating, should be able to discover sound-symbol relationships by reading a large variety of materials.

Psycholinguists and basal reader authors however, do agree that there is a need for continued refinement and enrichment of oral language to develop the foundation for attainment of literacy. The teacher's greatest help is the reinforcement of the communication purpose of reading and writing, the belief that a message can be encoded and decoded by the oral system the child already has, and that reading and writing parallel the language the child hears and speaks (Mass, 1982).

The language experience approach for beginning reading instruction utilizes the psycholinguistic concept of meaningful language and experience of the child. A natural language environment, surrounded by meaningful conversation, numerous creative writing activities, and an abundant variety of books and stories may be the best approach for children to understand written language

(Clay, 1975; Clark, 1976; Downing, 1974; Elkind, 1975; Goodman, cited in Smith, 1973; Mass, 1982; Mayfield, 1983; Morris, 1980; Nurss, 1980; Ollila, 1975; Schickedanz, 1981; Smith, 1973; Stauffer, 1980).

If the teacher guides rather than instructs, permits interaction between peers, and restrains from giving both positive and negative approval, the child can actively participate in the reading process and become an independent learner as he does when acquiring oral language (McDonell, 1975). If children are allowed to construct their own strategies for connecting oral language with its meaning about print, then they may not become dependent upon the teachers' rules of letter-sound relationships or word meanings (Mason, 1982). "The key factors of reading lie in the child and his interaction with information-providing adults, rather than in the particular materials used. ...Enlightened teachers can make much more use of existing materials simply by viewing the reading process as one in which the developing reader functions as a user of language" (Smith, 1973, p. 178).

Summary

Research indicates that children come to school with little knowledge of the activities involved in reading and only a vague awareness of the purpose of written language. Children are confused about the technical vocabulary used in reading instruction and their concepts of word boundaries often reflect linguistic divisions rather than the conventional definition of the printed word. The nature of the reading instructional materials used can determine what children

learn. The psycholinguistic theory of reading, which emphasizes reading for meaning, where the child is actively participating in the reading process as an independent learner and is constructing his own strategies for connecting oral language with its meaning about print; may be the best approach for children to understand written language.

This study investigated the relationship between cognitive clarity of reading and various reading instructional programs.

Chapter III

The Research Design

Purpose

The purpose of this study was to explore the relationship between cognitive clarity of reading, and various reading instructional programs with first and third grade students. Cognitive clarity of reading was defined as understanding the communication purpose of the written form of language, understanding the process involved in learning to read, and understanding the technical vocabulary used in reading instruction (sound, letter, word, and sentence).

Hypotheses

This study investigated the following null hypotheses for first and third grades.

1. There is no significant relationship between verbal understanding of the purpose of reading and reading program.
2. There is no significant relationship between verbal understanding of the process of reading and reading program.
3. There is no significant relationship between the use of context clues in reading for meaning and reading program.
4. There is no significant relationship between technical vocabulary used in reading instruction and reading program.
5. There is no significant relationship between concept of letter names and letter sounds and reading program.

6. There is no significant relationship between the concept of a word and reading program.

7. There is no significant relationship between concept of a sentence and reading program.

8. There is no significant relationship between visual segmentation of words and reading program.

9. There is no significant relationship between aural segmentation of words and reading program.

Preparatory Instruments and Procedures

Pilot Study

A pilot study was conducted in April 1984 for the purpose of evaluating the interview questions developed by this researcher.

The subjects were ten first grade students and ten third grade students selected from classrooms different from those used in the final study. The subjects were randomly selected by numbers to assure no bias was involved.

Interviews were conducted individually and responses were tape recorded.

Changes were made in the interview format as a consequence of the pilot study. A description of these changes may be found in Appendix A.

To test consistency of the subjects' response to the interview questions, a test-retest method was used to determine reliability. The students were interviewed again using the same questions two weeks after the initial interview. Seventy-five percent of the

first grade students were categorized as obtaining similar responses for both interviews. Seventy-six percent of the third grade students were categorized as obtaining similar responses for both interviews. A description of the results of the test-retest may be found in Appendix B.

Interview Reliability

To determine accuracy of the scoring of the interview questions, inter-rater reliability was used. Two graduate students in the reading program scored the responses of 12 students from first grade and 12 students from third grade from one of the three schools used in the final study. These scores were then compared with the scores obtained by this researcher.

Each question was individually scored. Each rater's scores were compared with those of the researcher.

The first graduate student was 94% accurate in scoring the first grade responses and 96% accurate in scoring the third grade responses when compared with the researcher's scores.

The second graduate student was 92% accurate in scoring the first grade responses and 90% accurate in scoring the third grade responses when compared with the researcher's scores.

Subjects

The subjects for this study consisted of 72 students from urban, suburban, and rural schools in Central and Western New York State. Twenty-four students from a language experience program, 24 students from an analytic phonics program, and 24 students from a synthetic

phonics program participated. A total of 36 students were represented from the first grade, with 12 students from each program. There was also a total of 36 students that were represented from the third grade, with 12 students from each program.

Test Instruments and Procedures

Interview

A semi-structured interview was given individually to each child to determine the child's understanding about the purpose and process of reading. Also questioned was the child's understanding of the terminology used in reading which included: sound, letter, word and sentence. The interview session was tape recorded.

Questions

1. Can you read?
2. What do you think reading is?
3. How do people read?
4. What does reading help you do?
5. When you are reading and you come to something that you don't know, what do you do?
6. What is a letter?
What is a letter sound?
Can you tell me the difference between the two?
7. What is a word?
8. Say a long word for me.
What makes a word long?
9. What do you think a sentence is?

Procedure

The interviewer asked the nine questions and encouraged the children to elaborate upon their answers. Question number three, What do people do when they read, was also asked to elicit responses other than the mechanical actions performed in reading such as, turning the pages, using your eyes... The interviewer tried to gain further information by statements such as, "Tell me more," or "What else can you think of?"

Scoring

The interview was measured by a response that suggested either cognitive confusion or cognitive clarity. The following responses were scored as cognitive confusion:

1. No response
2. Unclear or vague response
3. Misuse of the terms: sound, letter, word or sentence.
4. Naming of a physical activity or classroom procedure generally associated with formal reading instruction.
5. Value judgment response (to get a new bike, to pass to second grade).

The following responses were scored as cognitive clarity:

1. Describes word recognition or the decoding process.
2. Defines reading as getting meaning or communicating.
3. Initiates the correct use of the terms: letter, sound, word and sentence.
4. States a structural and functional classification of the categories, words and sentences.

Each subject's responses were categorized according to cognitive confusion I, or cognitive clarity II. Each question was scored individually. Question number five, When you are reading and you come to something that you don't know, what do you do? was a strategy type question and scored as either dependent or independent. The dependent response was considered when the subject asked for outside help and did not attempt it alone. This was scored A. The independent response was considered when the subject used phonics to find the answer, or when the subject used context clues which would indicate a reading for meaning strategy. These were scored as B and C respectively. A description of this procedure can be found in Appendix C.

The questions were categorized for scoring according to the following areas:

1. Purpose of reading - questions two and four.
2. Process of reading - question three.
3. Strategy - question five.
 - a. Dependent - ask someone
 - b. Independent
 - 1) Use of phonics
 - 2) Use of context clues
4. Understanding of the concepts of letters and sounds - question six.
5. Understanding of the concept word - questions seven and eight.
6. Understanding of the concept of sentence - question nine.

7. Understanding of linguistic terminology - questions six, seven, eight and nine.

Visual Tasks

Tasks administered directly after the interview session were used to determine the child's understanding of a written word and its boundaries, and his ability at discriminating between letters and words. The following visual tasks were adapted from Meltzer and Herse (1969). The purpose or intention for these particular tasks, was to use a nonverbal activity. A child may have a clear knowledge about a concept but may be unable to verbalize the concept.

1. The child was shown the following sentence typed on a strip of paper: Seven cowboys in a wagon saw numerous birds downtown today.

The instructions were for the child to count the words out loud and to point to them as they were counted. Then the child was to draw a circle around each word.

2. Each of the following (s, o, h, boy, foot, he) was printed on a 3" x 5" card and was placed in random order in front of the child. The child was instructed to pick up all the cards that had words on them.

The visual tasks were scored according to either correct or incorrect (C or I).

1. a. Counting 10 words - correct
b. Circling 10 words - correct
2. Correct - three letters and three words

Aural Tasks

To assess the child's ability to segment words in an aural context the following task adapted from a study by Downing (1973-1974) was presented.

1. The child heard the following tape recorded sentence, "We go to school every day." The child was asked to orally repeat the sentence. The child simultaneously tapped with a fist and said each word in the sentence.

The aural task was scored correct if the response was six taps.

Statistical Analysis

To measure the relationship between the three reading instructional programs and cognitive clarity of reading, a chi-square analysis was used for each of the hypotheses.

Summary

Seventy-two first and third grade children from three different reading programs: language experience, analytic phonics and synthetic phonics were interviewed to determine their understanding of the purpose and process of reading as well as the linguistic terminology used in reading instruction. Aural and visual tasks were also administered. Data were analyzed for statistically significant relationships using a series of chi-square distributions.

Chapter IV

Analysis of Data

Purpose

The purpose of this study was to examine the relationship between cognitive clarity of reading and various reading instructional programs with first and third grade students. The programs included: language experience, analytic phonics, and synthetic phonics. Cognitive clarity of reading was defined as understanding the communication purpose of the written form of language, understanding the process involved in learning to read, and understanding the technical vocabulary used in reading instruction (sound, letter, word, and sentence).

Findings and Interpretations

Each area of the cognitive clarity concept was analyzed separately for the first grade students and for the third grade students. This researcher compared student's concepts about reading according to reading instructional programs at two levels. The first level is represented by students who are just beginning to read at the end of first grade. The second level is represented by students who are more advanced in their reading at the end of third grade.

The first nine null hypotheses are considered for the first grade only.

1. There is no significant relationship between verbal understanding of the purpose of reading and reading program.

Analysis of the data did not reveal a significant relationship between the understanding of the purpose of reading and reading program.

The probability level of .05 was used and the degrees of freedom were determined to be 4. The chi-square value was 7.36 and a value of 9.49 or more was needed for significance. Therefore, the data failed to reject the first null hypothesis.

2. There is no significant relationship between verbal understanding of the process of reading and reading programs.

Table 1 provides the data for this analysis.

Table 1
Process of Reading - Question 3

Grade 1 Response	Reading Programs		
	Synthetic Phonics	Analytic Phonics	Language Experience
Cognitive Confusion			
Observed	10	10	5
Expected	8.33	8.33	8.33
Cognitive Clarity			
Observed	2	2	7
Expected	3.67	3.67	3.67

chi-square = 6.55 d.f. = 2

p .05 = 5.99 for significance

Analysis of the data in Table 1 revealed a significant relationship between verbal understanding of the process of reading and reading program. The chi-square value was 6.55 and a value of 5.99 or more was needed for significance. The data indicated that more than half of the students in the language experience program understood the process of reading.

More than half of the students in the synthetic phonics program and the analytic phonics program did not understand the process of reading. Therefore the data rejected null hypothesis two.

3. There is no significant relationship between the use of context clues in reading for meaning and reading program.

Analysis of the data did not reveal a significant relationship between the use of context clues in reading for meaning and reading program.

The probability level of .05 was used, and the degrees of freedom were determined to be 2. The chi-square value was 3.25 and a value of 5.99 or more was needed for significance. Therefore the data failed to reject the third null hypothesis.

4. There is no significant relationship between technical vocabulary used in reading instruction and reading program.

Analysis of the data did not reveal a significant relationship between technical vocabulary used in reading instruction and reading program.

The probability level of .05 was used and the degrees of freedom were determined to be 4. The chi-square value was 6.21 and

a value of 9.49 or more was needed for significance. Therefore the data failed to reject the fourth null hypothesis.

5. There is no significant relationship between concept of letter names and letter sounds and reading program.

Analysis of the data did not reveal a significant relationship between concept of letter names and letter sounds.

The probability level of .05 was used, and the degrees of freedom were determined to be 2. The chi-square value was 5.25 and a value of 5.99 or more was needed for significance. The data failed to reject the fifth null hypothesis.

6. There is no significant relationship between the concept of a word and reading program.

Table 2 provides the data for this analysis.

Analysis of the data in Table 2 revealed a statistically significant relationship between concept of a word and reading program. As indicated in the table the students in the language experience program had the clearest understanding of the concept of a word. More than half of the students demonstrated some understanding as well as some confusion of this concept. However, half of the students in the analytic phonics program and more than half of the students in the synthetic phonics program demonstrated cognitive confusion of this concept. Therefore the data rejected the sixth null hypothesis.

Table 2
Concept of the Word - Questions 7 and 8

Grade 1 Response	Reading Programs		
	Synthetic Phonics	Analytic Phonics	Language Experience
Cognitive Confusion			
Observed	9	6	1
Expected	5.33	5.33	5.33
Cognitive Clarity			
Observed	0	1	1
Expected	.67	.67	.67
Combination			
Observed	3	5	10
Expected	6	6	6

chi-square = 11.46 d.f. = 4

p .05 = 9.49 for significance

7. There is no significant relationship between concept of a sentence and reading program.

Table 3 provides the data for this analysis.

Analysis of the data in Table 3 revealed a statistically significant relationship between concept of a sentence and reading program. Seventy-five percent of the language experience students demonstrated a clear understanding of the concept of a sentence. One hundred percent of the synthetic phonics students and 92% of

Table 3
Concept of the Sentence - Question 9

Grade 1 Response	Reading Programs		
	Synthetic Phonics	Analytic Phonics	Language Experience
Cognitive Confusion			
Observed	12	11	3
Expected	8.67	8.67	8.67
Cognitive Clarity			
Observed	0	1	9
Expected	3.33	3.33	3.33

chi-square = 20.22 d.f. = 2

p .05 = 5.99 for significance

the analytic phonics students did not demonstrate a clear understanding of the concept of a sentence. Hypothesis seven was therefore rejected.

8. There is no significant relationship between visual segmentation of words and reading programs.

Analysis of the data did not reveal a significant relationship between visual segmentation of words and reading program.

The probability of .05 was used and the degrees of freedom were determined to be 2. The chi-square value was .13 and a value of 5.99 was needed for significance. The data failed to reject the eighth null hypothesis.

9. There is no significant relationship between aural segmentation of words and reading program.

Analysis of the data did not reveal a significant relationship between aural segmentation of words and reading program. However 83% of the students in the synthetic phonics program incorrectly responded to the aural task as compared with 50% of the language experience and 58% of the analytic phonics students.

The probability level of .05 was used, and the degrees of freedom were determined to be 2. The chi-square value was 3.13 and a value of 5.99 was needed for significance. Therefore the data failed to reject the ninth null hypothesis.

The first grade students in the language experience program demonstrated the clearest understanding of the process of reading, the concept of a word, and the concept of a sentence as compared with the students in the synthetic phonics and analytic phonics program.

The students in the synthetic phonics program demonstrated a poor understanding of aural segmentation of words as compared with students in the other two reading instructional programs.

The data from the purpose of reading, the use of context clues in reading for meaning, the technical vocabulary used in reading instruction, the concept of letter names and sounds and the visual segmentation of words for first grade students in all three reading programs were not statistically significant.

Hypotheses ten through eighteen are considered for the third grade only.

10. There is no significant relationship between verbal understanding of the purpose of reading and reading program.

Analysis of the data did not reveal a significant relationship between the understanding of the purpose of reading and reading program.

The probability level of .05 was used, and the degrees of freedom were determined to be 4. The chi-square value was 1.82 and a value of 9.49 was needed for significance. Therefore the data failed to reject the tenth null hypothesis.

11. There is no significant relationship between verbal understanding of the process of reading and reading program.

Analysis of the data did not reveal a significant relationship between verbal understanding of the process of reading and reading program.

The probability level of .05 was used and the degrees of freedom were determined to be 2. The chi-square value was .89 and a value of 5.99 was needed for significance. Most of the students did not demonstrate an understanding of the process of reading. Only twenty-five percent of the students were able to achieve cognitive clarity of the process of reading. Therefore, the data failed to reject the eleventh null hypothesis.

12. There is no significant relationship between the use of context clues in reading for meaning and reading program.

Table 4 provides the data for this analysis.

Analysis of the data in Table 4 revealed a statistically significant relationship between the use of context clues in reading

Table 4
Use of Context Clues - Question 5

Grade 3 Response	Reading Programs		
	Synthetic Phonics	Analytic Phonics	Language Experience
Cognitive Confusion			
Observed	12	10	7
Expected	9.67	9.67	9.67
Cognitive Clarity			
Observed	0	2	5
Expected	2.33	2.33	2.33

chi-square = 6.74 d.f. = 2

p .05 = 5.99 for significance

for meaning and reading program. None of the students in the synthetic phonics program indicated the use of clues or guessing when unsure about a word. Two of the analytic phonics students and five of the language experience students did use other means for finding out about a word other than asking someone or using phonic skills. Therefore, the data rejected the twelfth null hypothesis.

13. There is no significant relationship between technical vocabulary used in reading instruction and reading program.

Table 5 provides the data for this analysis.

The data in Table 5 show a significant relationship between the technical vocabulary used in reading instruction and the reading programs. Sixty-nine percent of the students were able to

Table 5
Technical Vocabulary - Questions 6, 7, 8, and 9

Grade 3 Response	Reading Programs		
	Synthetic Phonics	Analytic Phonics	Language Experience
Cognitive Confusion			
Observed	3	1	2
Expected	2	2	2
Cognitive Clarity			
Observed	0	0	4
Expected	1.33	1.33	1.33
Combination			
Observed	9	11	6
Expected	8.67	8.67	8.67

chi-square = 10.46 d.f. = 4

p .05 = 9.49 for significance

demonstrate some understanding as well as some misunderstanding about the terminology used. Of the four students that achieved cognitive clarity of vocabulary, all were in the language experience program. The chi-square value of 10.46 exceeded the critical value of 9.49 that was needed for significance, therefore, the data rejected the thirteenth null hypothesis.

14. There is no significant relationship between concept of letter names and letter sounds and reading program.

Analysis of the data did not reveal a significant relationship between the understanding of the difference of letter names and sounds and reading program.

The probability level of .05 was used and the degrees of freedom were determined to be 2. The chi-square value was 1.58 and a value of 5.99 was needed for significance. Therefore, the data failed to reject the fourteenth null hypothesis.

15. There is no significant relationship between the concept of a word and reading program.

Table 6 provides the data for this analysis.

Table 6
Concept of the Word - Questions 7 and 8

Grade 3 Response	Reading Program		
	Synthetic Phonics	Analytic Phonics	Language Experience
Cognitive Confusion			
Observed	6	3	2
Expected	3.67	3.67	3.67
Cognitive Clarity			
Observed	0	1	6
Expected	2.33	2.33	2.33
Combination			
Observed	6	8	4
Expected	6	6	6

chi-square = 12.55 d.f. = 4

p .05 = 9.49 for significance

The data in Table 6 show a significant relationship between the concept of a word and reading program. Fifty percent of the students demonstrated both cognitive clarity and cognitive confusion of the concept. Of the seven students who achieved total cognitive clarity, six were from the language experience program and one was from the analytic phonics program. None of the students from the synthetic phonics program demonstrated total cognitive clarity of the word concept. The chi-square value of 12.55 exceeded the critical value of 9.49 that was needed for significance; therefore, the data rejected the fifteenth null hypothesis.

16. There is no significant relationship between concept of a sentence and reading program.

Table 7 provides the data for this analysis.

Table 7
Concept of the Sentence - Question 9

Grade 3 Response	Reading Program		
	Synthetic Phonics	Analytic Phonics	Language Experience
Cognitive Confusion			
Observed	10	9	4
Expected	7.67	7.67	7.67
Cognitive Clarity			
Observed	2	3	8
Expected	4.33	4.33	4.33

chi-square = 7.46 d.f. = 2

p .05 = 9.49 for significance

The data in Table 7 show a significant relationship between concept of a sentence and reading program. Thirty-six percent of the students demonstrated cognitive clarity. Sixty-one percent of those students were from the language experience program. Ten of the twelve students from the synthetic phonics program showed cognitive confusion. Nine of the students from the analytic phonics program showed cognitive confusion. Four of the twelve students from the language experience students showed cognitive confusion. The chi-square value of 7.46 exceeded the critical value of 5.99 that was needed for significance, therefore, the data rejected the sixteenth null hypothesis.

17. There is no significant relationship between visual segmentation of words and reading program.

Analysis of the data did not reveal a significant relationship between visual segmentation of words and reading program.

The probability level of .05 was used and the degrees of freedom were determined to be 2. The chi-square value was .11 and a value of 5.99 was needed for significance. Therefore, the data failed to reject the seventeenth null hypothesis.

19. There is no significant relationship between aural segmentation of words and reading program.

Analysis of the data did not reveal a significant relationship between aural segmentation of words and reading program. However, 47% of the students who did not correctly recognize aural word boundaries were in the language experience program. Forty-eight percent of the students who correctly recognized aural word

boundaries were in the synthetic phonics program. The probability level of .05 was used and the degrees of freedom were determined to be 2. The chi-square value was 4.80 and a value of 5.99 was needed for significance. Therefore, the data failed to reject the eighteenth null hypothesis.

The second visual task of discrimination between three letters and three words was found to be unnecessary for analysis. Of the 72 students who performed this task, only one student showed cognitive confusion. This may indicate that the students are very familiar with this type of task.

The third grade students in the language experience program demonstrated the clearest understanding of the technical vocabulary used in reading instruction, of the use of context clues while reading for meaning, of the concept of a word, and the concept of a sentence as compared with the students in the synthetic phonics and analytic phonics program. The data from the purpose of reading, the process of reading, the concept of letter names and sounds, the visual segmentation of words and the aural segmentation of words for third grade students in all three reading programs were not statistically significant.

Summary

The findings of this study rejected hypotheses two, six, seven, twelve, thirteen, fifteen, and sixteen. In the first grade more than half of the language experience students achieved cognitive clarity of the process of reading as opposed to more than half of the

students who did not in the synthetic phonics and analytic phonics programs. A significant relationship was also demonstrated by first and third graders with the concept of word and sentence. The majority of first grade students who demonstrated a combination of cognitive clarity and cognitive confusion as opposed to cognitive confusion of the word concept were in the language experience program. In the third grade fifty percent of the language experience students achieved cognitive clarity as opposed to eight percent of the analytic phonics students and zero percent of the synthetic phonics students. In both first and third grade, the language experience students showed an overwhelming understanding of the concept of a sentence as compared with analytic phonics and synthetic phonics students. In third grade, the language experience students made the most use of context clues. Also in the third grade, the language experience students demonstrated the clearest understanding of the technical vocabulary used in reading instruction.

The data failed to reject hypotheses one, three, four, five, eight, nine, ten, eleven, fourteen, seventeen, and eighteen. There was no significant relationship between reading program and cognitive clarity of the purpose of reading for first and third grades, of the use of context clues for first grades, of the technical vocabulary for first grades, of the difference of letter names and sounds of first and third grades, and of the process of reading for third grades. Also there was no significant relationship between visual and aural segmentation of words and reading program in first and third grades.

Chapter V

Conclusions and Implications

Purpose

The purpose of this study was to explore the relationship between cognitive clarity of reading and various reading instructional programs with first and third grade students. Cognitive clarity of reading was defined as understanding the communication purpose of the written form of language, understanding the process involved in learning to read, and understanding the technical vocabulary used in reading instruction (sound, letter, word, and sentence). The programs included: language experience, analytic phonics, and synthetic phonics.

Conclusions

The results of this study provide support for the theory that reading instructional programs do have a significant relationship with cognitive clarity of reading. These conclusions apply specifically to the sample first and third grade populations studied, but may be generalized to other matching populations. Based on the data obtained from the interview sessions and the visual and aural tasks completed, the following conclusions were drawn:

1. First grade students in the language experience program described the process of reading in terms of word recognition, and reading for meaning. Most of the students in the other two programs

thought of the reading process in mechanical terms (open the book, exercise your eyes) or as classroom procedures (don't yell, read softly and quietly, listen to the teacher). By the third grade most students did not verbalize a clear understanding of the process of reading. Their responses reflected word recognition skills or classroom procedures. Few third graders verbalized reading for meaning.

2. The students in the language experience program in first and third grade demonstrated the clearest understanding of the concept of a word.

3. The language experience students also showed the clearest understanding of the concept of a sentence, in both first and third grade.

4. In the third grade the language experience students used predictive strategies while reading in contrast to the other two reading groups who did not.

5. The students in the language experience program in third grade also understood the technical terminology better than the students in the other two reading programs.

6. Most students perceived the purpose of reading as the learning of school related subjects and doing classroom activities such as, answering questions and completing workbooks.

7. Although language experience students showed significantly better responses to some aspects of cognitive clarity of the reading process than did students in the other two programs, the majority of students in the total three reading programs showed confusion of linguistic terminology and the purpose and process of reading.

8. Seventeen percent of students in all programs used semantic and syntactic cues as well as decoding skills while trying to discover the meaning of a word.

9. At the end of first grade many students were still confused about the difference between letters and words and the definition of compound word. Some students did not consider function words such as, in, and a as words.

10. Most students continued to segment words according to speech rather than as separate words, even at the end of third grade.

Implications for Research

Continued research with a larger sample of students is suggested to confirm the findings of this study. Twenty-four students were studied from each reading program, however a larger study might obtain more specific results.

Other reading instructional programs might also be included for further exploration of cognitive clarity. In this study the third grade language experience class consisted of a more eclectic approach to reading, encompassing various methods rather than one specific teaching strategy.

A variety of methods to determine children's understanding about the purpose and process of reading as well as the terminology used may add to the ability to evaluate children's concepts about reading. An enlargement of the interview questions, as well as more non-verbal tasks is suggested.

One limitation in this research study was that some young children may understand a concept but may be unable to verbalize it, therefore the response may not be an accurate indication of their true knowledge or thinking (Clark, 1976; Goodman, cited in Smith, 1973; Reid, 1969).

A longitudinal study including older children would be beneficial in understanding acquisition of the cognitive clarity concept.

Implications for Classroom Practice

In this study the majority of students viewed reading in terms of workbooks, or questions asked by the teacher, or textbooks. As previous research indicated (Downing, 1970; Johns & Ellis, 1976; Reid, 1966; and Weintraub & Denny, 1965) young children have misunderstandings about the purpose and process of reading. Children are not perceiving reading as getting meaning but as decoding skills. As Tovey (1976) suggested, reading is a word calling process for many students. There is an overemphasis on decoding skills and not enough on meaning and predictive strategies. Children need to be taught that reading is a predictive process using the fewest cues necessary to derive meaning, and not an oral activity involving carefully looking at each word and sounding them out (Clark, 1976; Goodman, cited in Gollasch, 1982); Lee, 1969; Smith, 1973, Tovey, 1976).

In this study the students who were most able to verbalize an understanding about the concept of a word were from the language experience program. It seems that these students by way of instruction

are gaining knowledge about the relationship between the written and spoken word and therefore the connection between their language and reading. Fryer (1976) points out that understanding the inter-relationship of words and letters and not just giving concrete examples of these, is critical in developing a conceptualization of reading. By understanding that letters represent sounds, and words are made up of letters, and sentences are made up of words, which all carry meaning, then children become aware of the processes of language (Niensted, 1969). Goodman (cited in Gollasch, 1982) states that when children are knowledgeable about the functions of language they are going to learn easily and painlessly. The language experience approach aids children in their understanding about the concept of a word.

The teacher can be aware of the children's understanding of word boundaries when children read back their dictated stories.

This study found that many students even at the end of third grade continued to segment words according to their speech rather than as separate words. Previous research (Holden & MacGinitie, 1972; Huttenlocher, 1964; Karpova, 1955; and Vygotsky, 1962) has shown that children's conceptions about word boundaries often reflect linguistic rather than the conventional printed representation. Teachers therefore must be aware that not all children perceive words in their written form but rather as they hear their spoken form. As Clay (1966, cited by Weintraub, 1968) stated, finger-pointing and voice-pointing serve to strengthen the awareness of the relationship of the written and spoken form of words.

Teachers also need to be aware that children do not always perceive the terms used in reading instruction. Although teachers use the terms: sound, letter, word, and sentence often throughout the day from the beginning years of school children confuse these concepts. For the less able reader this results in a state of cognitive confusion (Downing, 1970). This research study found that many students at the end of third grade continued to confuse the terminology used in reading instruction. Again the language experience students were best able to understand the terminology used in reading instruction. This research also found that as children grow older they were better able to express their understanding about the terminology used in reading. This research confirmed Reid's (1966) and Downing's (1970) studies, that increased reading experience helps children comprehend the technical vocabulary.

Educators can aid children in understanding the technical vocabulary, by using the terms appropriately and flexibly, by explaining the terms used and also by explaining why certain activities will enhance their understanding of these terms.

In both first and third grades students in the language experience program performed better than the students in the synthetic phonics and analytic phonics program in their use of context clues.

This would seem to indicate these students are reading for meaning. They understand that reading is not just analyzing the words but is communicating also.

It is suggested that teachers need to continually reinforce the communication purpose of reading. Encouragement of meaningful conversation and dictated stories of children's own experiences and choral reading and rhyme reading should be included in all reading instructional programs to aid in the understanding of the nature and function of reading.

Summary

Educators need to realize that beginning readers and poor readers do not understand the purpose and process of reading, as well as the terminology used in reading instruction. Language experience students rather than synthetic phonics or analytic phonics students showed significantly better responses to the technical terminology used in reading, predictive strategies used in reading, and understanding the process of reading.

Children need to perceive reading as getting meaning and less as an activity involving decoding skills. Teachers need to continually reinforce the communication purpose of reading.

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APPENDIX A

Revisions in Interview Questions
Based on the Pilot Study

Revisions in Interview Questions

Based on the Pilot Study

1. "Can you explain the difference between the name and the sound of a letter?" was changed to "What is a letter name?" "What is a letter sound?" "Can you tell me the difference between the two?"
2. Added to question eight, "Say a long word for me", was "What makes a word long?"
3. An informal format was developed to encourage the child to feel comfortable and to elaborate his/her responses.

APPENDIX B

The Results of the Test - Retest Method for Reliability

Grade 1

Test-Retest Reliability

N = 10 students

<u>Questions</u>	<u>Number</u> <u>Correct</u>	<u>Total</u> <u>Number</u>	
#2	8	10	= correct = 80%
Ex			
#3	6	10	= 60%
#4	7	10	= 70%
#6	6	10	= 60%
#7	9	10	= 90%
#8	7	10	= 70%
#9	10	10	= 100%
#5	7	10	= 70%
		<hr/> 600	

	.75	.75
8	600	75% accurate
	<hr/> 56	
	40	
	<hr/> 40	

Grade 3 Pilot Study

Test-Retest Reliability

N = 10

<u>Questions</u>	<u>Number</u> <u>Correct</u>	<u>Total</u> <u>Number</u>	
#2	8	of 10	= 80%
#3	8	of 10	= 80%
#4	7	of 10	= 70%
#6	9	of 10	= 90%
#7	6	of 10	= 60%
#8	8	of 10	= 80%
#9	7	of 10	= 70%
#5	8	of 10	= 80%

	.76	.76
8	610	76% accurate
	56	
	50	
	48	
	20	

APPENDIX C

Scoring Sheets

Language Experience Approach

Grade 1

Category I - Cognitive Confusion
 Category II - Cognitive Clarity

Subject	#2	#3	#4	#6	#7	#8	#9	Ask-A	Phonics-B	Reading for Meaning-C
#1	I	II	I	II	II	I	II			C
#2	I	II	I	I	II	I	II		B	
#3	II	I	II	II	II	II	II		B	
#4	I	II	I	II	I	II	I	A	B	
#5	I	II	I	II	II	I	II	A	B	
#6	II	II	II	II	II	I	II	A	B	
#7	I	I	I	II	I	II	I	A		C
#8	I	I	I	II	II	I	I	A		
#9	I	II	II	II	I	II	II	A	B	
#10	II	I	II	II	I	I	II	A	B	
#11	I	I	II	II	II	I	II	A	B	C
#12	I	II	I	II	II	I	II		B	

Language Experience Approach - Eclectic

Grade 3

Category I - Cognitive Confusion
Category II - Cognitive Clarity

Subject	#2	#3	#4	#6	#7	#8	#9	Ask-A	Phonics-B	Reading for Meaning-C
#1	I	I	II	II	II	I	II	A		
#2	II	I	II	II	II	II	II		B	
#3	I	II	II	I	II	II	II		B	
#4	I	I	I	II	II	I	I		B	
#5	I	I	I	II	II	II	II	A		C
#6	I	I	I	II	II	II	II	A		
#7	I	I	I	II	I	II	II	A	B	C
#8	I	I	I	I	I	II	I		B	
#9	I	II	II	I	I	I	I	A		
#10	I	I	I	I	I	I	I		B	C
#11	I	I	II	I	II	II	II	A	B	C
#12	II	II	II	II	II	II	II	A		C

Analytic Phonics

Grade 1

Category I - Cognitive Confusion
Category II - Cognitive Clarity

Subject	#1	#2	#3	#4	#6	#7	#8	#9	Ask-A	Phonics-B	Reading for Meaning-C
#1		I	I	I	II	I	II	I		B	
#2	I	I	I	I	I	I	II	I	A	B	
#3		I	I	I	II	II	II	I		B	
#4		I	I	I	I	I	II	I	A		
#5		II	II	II	II	I	I	I	A	B	
#6		II	I	II	II	I	II	I	A	B	
#7		I	I	I	II	I	I	I	A	B	
#8		I	I	I	I	I	I	I	A	B	C
#9		I	II	I	II	I	I	I	A		C
#10		I	I	I	I	I	I	I	A		
#11		I	I	I	I	I	I	I	A		
#12		I	I	I	I	I	II	I		B	

Analytic Phonics

Grade 3

Category I - Cognitive Confusion
 Category II - Cognitive Clarity

Subject	#2	#3	#4	#6	#7	#8	#9	Ask-A	Phonics-B	Reading for Meaning-C
#1	II	I	II	I	II	I	II			B
#2	II	I	I	II	I	II	I			B
#3	I	I	I	II	I	II	I	A		B
#4	I	I	I	II	I	I	I	A		
#5	I	I	I	I	I	II	I	A		B
#6	II	II	II	II	I	II	I			B
#7	II	I	I	II	I	II	I	A		B
#8	II	I	I	II	I	II	I			
#9	I	I	I	II	I	I	I	A		B
#10	I	I	I	I	I	I	I	A		
#11	I	II	II	II	I	II	I	A		B
#12	II	I	II	I	II	II	II	A		B

Reading Program
Synthetic Phonics

Grade 1

Category I - Cognitive Confusion
Category II - Cognitive Clarity

Subject	Questions							Dependent	Independent	
	#2	#3	#4	#6	#7	#8	#9	Ask-A	Phonics-B	Reading for Meaning-C
#1	I	I	I	II	I	II	I	A		
#2	I	II	I	II	I	I	I	A	B	
#3	II	I	I	II	I	II	I		B	
#4	I	I	I	II	I	I	I		B	
#5	I	I	I	II	I	I	I	A		
#6	I	II	I	I	I	II	I		B	
#7	I	I	I	I	I	I	I		B	
#8	II	I	I	II	I	I	I	A	B	
#9	I	I	I	II	I	I	I		B	
#10	I	I	II	I	I	I	I	A		
#11	I	I	I	I	I	I	I		B	
#12	I	I	II	I	I	I	I	A		

Reading Program
Synthetic Phonics

Grade 3

Category I - Cognitive Confusion
Category II - Cognitive Clarity

Subject	Questions								Dependent	Independent
	#2	#3	#4	#6	#7	#8	#9	Ask-A	Phonics-B	Reading for Meaning-C
#1	I	II	II	I	I	I	I	A	B	
#2	II	I	I	I	I	II	I	A	B	
#3	I	II	I	II	I	I	II	A	B	
#4	I	I	I	II	I	I	II		B	
#5	II	I	II	I	I	II	I	A		
#6	II	II	II	II	I	II	I	A	B	
#7	II	I	II	I	I	I	I	A	B	
#8	I	I	I	I	II	I	I	A	B	
#9	II	I	I	I	II	I	I	A	B	
#10	I	I	II	II	I	I	I	A	B	
#11	I	I	II	II	I	II	I		B	
#12	I	II	II	I	I	I	I	A	B	

APPENDIX D

Samples of Interviews

Responses showing examples of cognitive confusion.

Subject #4

Question #1: Yes

Question #2: It's for learning.

Question #3: They read stories. Sometimes people read good and sometimes they read bad. Sometimes they stutter.

Question #4: Read better. Think about stuff. Learn how to read.

Question #5: I try to sound it out. I try to say it.

Question #6: 'A' - letter, /ā/. They sound different.

Question #7: Something that you say. Something that you do.

Question #8: Association. Vowels, the sounds, the consonants.

Question #9: Something that you write that you think it is.

Visual Task #1

a. Correct

b. Correct

Visual Task #2

a. Correct

Aural Task

a. Incorrect - 7 taps - every

Subject #7

Question #1: Yes

Question #2: Reading a word

Question #3: They read stories and read to themselves. They practice.

Question #4: I don't know.

Question #5: Read to yourself. Ask your mother, dad, sister. Sound it out.

Question #6: 'A' - letter, /a/ - sound.

Question #7: A long word or a short word.

Question #8: Tape recorder, because it has letters.

Question #9: I don't know.

Visual Task #1

a. Correct

b. Correct

Visual Task #2

a. Correct

Aural Task

a. Incorrect, four taps - go to, and every day

Subject #10

Question #1: Yes

Question #2: Fun

Question #3: Silent

Question #4: Get smarter

Question #5: Ask my mother, father, sister. Look it up in the dictionary.

Question #6: They sound different

Question #7: No response

Question #8: Young, add something to it..

Question #9: A long paragraph.

Visual Task #1

- a. Incorrect - 11 down town
- b. Incorrect - circled down town

Visual Task #2

- a. Correct

Aural Task

- a. Incorrect - 7 taps every

Subject #11

Question #1: Yes

Question #2: Good, nice

Question #3: Help kids. Help them read. Easy.

Question #4: Read lots of things.

Question #5: Ask your father. Tell your mother.

Question #6: 'L' is the sound, lion is the name.

Question #7: Tiger

Question #8: Dragon, because it is a dragon.

Question #9: Talking to each other.

Visual Task #1

a. Correct

b. Correct

Visual Task #2

a. Correct

Aural Task

a. Incorrect

Subject #8

Question #1: Yes

Question #2: It's fun and it helps you and if you read good enough you might even get a promotion on that. And in fourth grade if you read a little better you might even get a little better mark.

Question #3: They get a book that's interesting to them, read it and they might read it to their mother and they might take turns reading. To me all I do is read by myself silently so I won't disturb anybody.

Question #4: Learn.

Question #5: Raise your hand and ask the teacher. Or if you're home ask your big sister or brother. Sound and blend.

Question #6: No

Question #7: You can speak a word, write a word, there's a lot of words. There's so many words I can't even think of em all.

Question #8: Seaweed

Question #9: A lot of different words put into one sentence.

Visual Task #1

a. Correct

b. Correct

Visual Task #2

a. Correct

Aural Task

a. Tapped twice for every

Subject #11

Question #1: A little.

Question #2: Good. It's good because um you won't be able to flunk. If you flunk reading you gotta stay in the same grade over again.

Question #3: Sound and blend. Some people know how to read they don't gotta sound and blend. They just read but don't sound and blend.

Question #4: Be a good learner.

Question #5: Sound and blend.

Question #6: One sounds different and one sounds a little softer.

Question #7: Can, pan

Question #8: Antlers, because it's long - the lers is long.

Question #9: I see the meat.

Visual Task #1

a. Omitted a

b. Omitted a

Visual Task #2

a. Correct

Aural Task #1

a. 5 taps - tapped once for every day.

Responses showing examples of cognitive clarity.

Subject #3

Question #1: A little

Question #2: It's exciting, fun and good. Because it gets greater and greater. The books start to get fun, and good.

Question #3: No response

Question #4: It helps me get more smarter. And it helps you get a job. It helps you do things. It helps you drive, it helps you listen, to the teacher.

Question #5: I sound and blend. If you don't get it right just go over the words again.

Question #6: Beating heart - /b/ the sound of a letter, 'B' the name of a letter. Baby lamb - /a/ sound of a letter. Baby lamb - name of a letter. Flat tire /s/, s - name

Question #7: No response

Question #8: Sesquicentennial because it's long because of the letters.

Question #9: When you write about something

Visual Task #1

a. 48 words - counted letters

b. 10 words - circled correctly

Visual Task #2

a. Correct

Aural Task

a. 7 taps - tapped twice for 'every'

Subject #5

Question #1: Yes

Question #2: Kind of like a story. Telling you information.
Telling you how to grow things.

Question #3: They don't talk. They read in their minds.

Question #4: Learn things. How to plant things.

Question #5: Try to sound it out. If you can't sound it out,
call the teacher. Go ask your mom.

Question #6: 'R', /r/.

Question #7: A word with letters in it.

Question #8: Octopus, how long the word is, when you say it, it's
long.

Question #9: A story, you can read sentences.

Visual Task #1

- a. Incorrect - counted all the letters
- b. Correct

Visual Task #2

- a. Correct

Aural Task

- a. Incorrect - 7 taps - every twice

Subject #6

Question #1: U huh

Question #2: It's like when you sound and blend words and put them together, then it will make one word. You are supposed to read to get an education. If you read you'll know more things about yourself and about other things and stories. When you read when you get done sometimes you understand things.

Question #3: They sound and blend words and when you read a story you put parts, paragraphs and put em in each individual and um they make them and then read them till the end. Then when they get to the end they get the meaning about what they're reading about.

Question #4: Helps me learn to read like if I don't know how to read I wouldn't be able to read books, stories, like if my mother asked me to read her the paper and I don't know how to read and if I have to tell her no then she'll think when I'm in school I don't learn. Reading helps me know my name and others.

Question #5: I ask my mother or if I'm at school I ask my teacher. I'll take each letter and sound and blend and try and make a word.

Question #6: When you sound out a letter you make the sound and the name of a letter is like the wall cards in first grade when the sound is /e/ and you say /ee/ and the name of the letter is 'E'.

Question #7: Put the letters together and form one word.

Question #8: Accomplishment, because it has a lot of letters.

Question #9: You have to have four words to make a sentence.

You can have more than four and less than four.

Visual Task #1

a. Correct

b. Omitted the word a.

Visual Task #2

a. Correct

Aural Task #1

a. Correct

Subject #6

Question #1: Yes

Question #2: Where you can imagine different things. Fun
sometimes it's hard.

Question #3: They think different things. If it's a funny story
they laugh. Answer different question.

Question #4: Usually it helps me develop new skills. It helps
me imagine different things. To read better.
Sound out words better.

Question #5: Try sounding it out. Go to a dictionary. Ask someone
else what it is.

Question #6: The sound is different because the sound - you say
it, and the name - the sound can have two different
sounds and the name is just one sound.

Question #7: Different letters put together.

Question #8: Invention, it has a lot of letters in it.

Question #9: Three or more words put together.

Visual Task #1

a. Correct

b. Correct

Visual Task #2

a. Correct

Aural Task

a. Correct

Subject #6

Question #1: Yes

Question #2: I think it's something that every body does. A sort of type of happiness.

Question #3: Theyll read in stories, like reading in a book. Well if they can't figure out the word they know the alphabet and all the sounds and they try to sound out the word if they don't know the word. They're thinking about what the author's trying to do, like a mystery.

Question #4: Helps us learn about pretend things like the stuff in your imagination.

Question #5: Sound out the letters, or ask your mother or somebody. Put a bookmark in it and ask your mother or dad when they get home. Put it on the computer and the computer could tell you.

Question #6: Well if there's an 'E' on the end of the word it could say it's name, but if it doesn't got an 'E' at the end it doesn't say it's name. 'X' - name, /kw/ - sound.

Question #7: A lot of letters put together to make something.

Question #8: Because you got so many letters and it's a word you gotta learn because you can't sound it out.

Question #9: Like it's asking you a question like you are. It could be telling you something you never knew before.

Visual Task #1

- a. Correct
- b. Correct

Visual Task #2

- a. Correct

Aural Task

- a. Tapped twice for every

Subject #12

Question #1: Yes

Question #2: A source of learning but also it is a lot of fun.

It is a way to tell people things like on street signs it tells you to go left or right.

Question #3: Well sometime people sit down and relax. Some people just walk around, pacing around. They take letters and read them and make words and they have a story out of that and they read it.

Question #4: Helps me learn more things and have fun. And teachers know the right answers to the reading books and teachers tell us the answers to the workbooks. Helps me to ride my bike by the street signs.

Question #5: If I was in school I would ask my teacher, at home I would ask my parents. I would read the rest of the story and I might get to know what that word is because what's in reading that I like, then I read the rest of the paragraph and I figured out the rest of the word.

Question #6: Well I can tell you the difference between letters. Like 'A' is a vowel and 'C' is a consonant. The sound of a letter for 'A' - all vowels, there is a long vowel and it sounds like it's own name but for short vowels it is like /ă/.

Question #7: A word is a group of letters that forms something you can understand.

Question #8: Independence, because it is, gots lots of letters
in it.

Question #9: A sentence is a group of words that says something.

Visual Task #1

a. Correct

b. Correct

Visual Task #2

a. Correct

Aural Task

a.. Correct